



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 116638

To: Sarvamangala Devi
Location: REM 3C18
Art Unit: 1645
Thursday, March 18, 2004

From: Beverly Shears
Location: Remsen Bldg.
RM 1A54
Phone: 571-272-2528

Case Serial Number: 10/070775

beverly.shears@uspto.gov

Search Notes

Shears, Beverly

From: Devi, Sarvamangala
Sent: Thursday, March 11, 2004 7:53 AM
To: Shears, Beverly
Subject: 10/070,775

Beverly:

Please perform a sequence and an interference search for the following in application SN 10/070,775:

A polynucleotide comprising SEQ ID NO: 1 or a complement thereof. Please run the DNA against amino acid sequences.

Please include a search for inventors' names: Mohamend El-Sherbeini; and Barbara Azzolina.

Thanks.

S. DEVI, Ph.D.
AU 1645



STAFF USE ONLY

Date completed: 03-18-04
Searcher: Beverly C 2528
Terminal time: _____
Elapsed time: _____
CPU time: _____
Total time: _____
Number of Searches: _____
Number of Databases: 3

Search Site

____ STIC
____ CM-1
____ Pre-S

Type of Search

____ N.A. Sequence
____ A.A. Sequence
____ Structure
____ Bibliographic

Vendors

____ IG
____ ☒ STN
____ ☒ Dialog
____ APS
____ Geninfo
____ SDC
____ DARC/Questel
____ ☒ Other CON

Devij S.
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18mar04 10:21:02 User219783 Session D1999.2

SYSTEM:OS - DIALOG OneSearch

File 65:Inside Conferences 1993-2004/Mar W2

(c) 2004 BLDSC all rts. reserv.

File 440:Current Contents Search(R) 1990-2004/Mar 18

(c) 2004 Inst for Sci Info

File 348:EUROPEAN PATENTS 1978-2004/Mar W01

(c) 2004 European Patent Office

File 357:Derwent Biotech Res. 1982-2004/Mar W4

(c) 2004 Thomson Derwent & ISI

File 113:European R&D Database 1997

(c)1997 Reed-Elsevier(UK)Ltd All rts reserv

*File 113: This file is closed (no updates)

Set	Items	Description
Set	Items	Description
S1	27	AU=(EL SHERBEINI, M? OR EL SHERBEINI M? OR ELSHERBEINI M? - OR ELSHERBEINI, M?)
S2	23	AU=(AZZOLINA, B? OR AZZOLINA B?)
S3	7	S1 AND S2
S4	13	(S1 OR S2) AND AERUGINOSA
S5	13	S3 OR S4
S6	10	RD (unique items)

>>>No matching display code(s) found in file(s): 65, 113

6/3,AB/1 (Item 1 from file: 440)

DIALOG(R)File 440:Current Contents Search(R)

(c) 2004 Inst for Sci Info. All rts. reserv.

12583928 References: 16

TITLE: The cell wall and cell division gene cluster in the Mra operon of
Pseudomonas aeruginosa: Cloning, production, and purification of
active enzymes

AUTHOR(S): Azzolina BA; Yuan XL; Anderson MS; El-Sherbeini
M (REPRINT)

CORPORATE SOURCE: Merck Res Labs, Dept Biochem, POB 1000/Rahway//NJ/07065
(REPRINT); Merck Res Labs, Dept Biochem, /Rahway//NJ/07065

PUBLICATION TYPE: JOURNAL

PUBLICATION: PROTEIN EXPRESSION AND PURIFICATION, 2001, V21, N3 (APR), P
393-400

GENUINE ARTICLE#: 418GE

PUBLISHER: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495
USA

ISSN: 1046-5928

LANGUAGE: English DOCUMENT TYPE: ARTICLE

ABSTRACT: We have cloned the Pseudomonas aeruginosa cell wall
biosynthesis and cell division gene cluster that corresponds to the mra
operon in the a-min region of the Escherichia coli chromosome. The
organization of the two chromosomal regions in P. aeruginosa and E,
coli is remarkably similar with the following gene order: pbp3/pbpB, murE,
murF, mraY, murD, ftsW, murG, murC, ddlB, ftsQ ftsA, ftsZ, and envA/lpxC,
All of the above P. aeruginosa genes are transcribed from the same
strand of DNA with very small, if any, intragenic regions, indicating that

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these genes may constitute a single operon. All five amino acid ligases, MurC, MurD, MurE, MurF, and DdlB, in addition to MurG and MraY were cloned in expression vectors. The four recombinant *P. aeruginosa* Mur ligases, MurC, MurD, MurE, and MurF were overproduced in *E. coli* and purified as active enzymes. (C) 2001 Academic Press.

6/3,AB/2 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

01287348

MRAY GENE AND ENZYME OF PSEUDOMONAS AERUGINOSA
MRAY GEN UND DAS ENZYM DER PSEUDOMONAS AERUGINOSA
PROTEINE MRAY ET GENE DE PSEUDOMONAS AERUGINOSA
PATENT ASSIGNEE:

Merck & Co., Inc., (2645180), 126 East Lincoln Avenue, Rahway, New Jersey
07065-0907, (US), (Applicant designated States: all)

INVENTOR:

EL-SHERBEINI, Mohamed, 126 East Lincoln Avenue, Rahway, NJ
07065-0907, (US)

AZZOLINA, Barbara, 126 East Lincoln Avenue, Rahway, NJ 07065-0907,
(US)

LEGAL REPRESENTATIVE:

Hiscock, Ian James et al (73622), European Patent Department, Merck &
Co., Inc., Terlings Park, Eastwick Road, Harlow, Essex CM20 2QR, (GB)
PATENT (CC, No, Kind, Date): EP 1222197 A1 020717 (Basic)

WO 200125251 010412

APPLICATION (CC, No, Date): EP 2000968545 000929; WO 2000US27056 000929

PRIORITY (CC, No, Date): US 157580 P 991004

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: C07H-021/04; C12P-021/06; C12N-015/09;

C12N-015/00

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

6/3,AB/3 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

01279978

MURC GENE AND ENZYME OF i PSEUDOMONAS AERUGINOSA /i
GENE MURC ET ENZYME DE i PSEUDOMONAS AERUGINOSA /i
PATENT ASSIGNEE:

Merck & Co., Inc., (2645180), 126 East Lincoln Avenue, Rahway, New Jersey
07065-0907, (US), (Applicant designated States: all)

INVENTOR:

EL-SHERBEINI, Mohammed, 126 East Lincoln Avenue, Rahway, NJ
07065-0907, (US)

AZZOLINA, Barbara, 126 East Lincoln Avenue, Rahway, NJ 07065-0907,
(US)

PATENT (CC, No, Kind, Date):

Searcher : Shears 571-272-2528

10/070775

WO 2001019979 010322
APPLICATION (CC, No, Date): EP 2000964958 000911; WO 2000US24845 000911
PRIORITY (CC, No, Date): US 154073 P 990914
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: C12N-015/09; A61K-031/70
LANGUAGE (Publication,Procedural,Application): English; English; English

6/3,AB/4 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

01279409

MURE PROTEIN AND GENE OF i PSEUDOMONAS AERUGINOSA /i
PROTEINE MURE ET GENE DE i PSEUDOMONAS AERUGINOSA /i
PATENT ASSIGNEE:

Merck & Co., Inc., (2645180), 126 East Lincoln Avenue, Rahway, New Jersey
07065-0907, (US), (Applicant designated States: all)

INVENTOR:

EL-SHERBEINI, Mohammed, 126 East Lincoln Avenue, Rahway, NJ
07065-0907, (US)

AZZOLINA, Barbara, 126 East Lincoln Avenue, Rahway, NJ 07065-0907,
(US)

PATENT (CC, No, Kind, Date):

WO 2001019843 010322

APPLICATION (CC, No, Date): EP 2000961711 000911; WO 2000US24743 000911
PRIORITY (CC, No, Date): US 154117 P 990915
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: C07H-021/04; C12P-021/06; C12N-015/09;
C12N-015/00
LANGUAGE (Publication,Procedural,Application): English; English; English

6/3,AB/5 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2004 European Patent Office. All rts. reserv.

01277403

MURF GENE AND ENZYME OF i PSEUDOMONAS AERUGINOSA /i
GENE MURF ET ENZYME DE i PSEUDOMONAS AERUGINOSA /i
PATENT ASSIGNEE:

Merck & Co., Inc., (200478), 126 East Lincoln Avenue, Rahway, NJ
07065-0907, (US), (Applicant designated States: all)

INVENTOR:

EL-SHERBEINI, Mohammed, 126 East Lincoln Avenue, Rahway, NJ
07065-0907, (US)

AZZOLINA, Barbara, 126 East Lincoln Avenue, Rahway, NJ 07065-0907,
(US)

PATENT (CC, No, Kind, Date):

WO 2001018018 010315

APPLICATION (CC, No, Date): EP 2000961584 000906; WO 2000US24437 000906
PRIORITY (CC, No, Date): US 153293 P 990910

Searcher : Shears 571-272-2528

10/070775

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: C07H-021/02; C07H-021/04; C12N-015/00;

C12N-015/09; C12N-015/63; C12N-015/70; C12N-015/74; C12N-009/00;

C12N-001/20; C12N-001/14; C12N-001/16; C12N-001/18; C12N-005/04;

C12N-005/10; C12N-005/00; G01N-033/53

LANGUAGE (Publication,Procedural,Application): English; English; English

6/3,AB/6 (Item 5 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01114522

MURD PROTEIN AND GENE OF *PSEUDOMONAS AERUGINOSA*

MURD PROTEIN UND GEN VON *PSEUDOMONAS AERUGINOSA*

PROTEINE MurD ET GENE DE *PSEUDOMONAS AERUGINOSA*

PATENT ASSIGNEE:

MERCK & CO., INC., (200475), 126 East Lincoln Avenue, Rahway, New Jersey 07065, (US), (Applicant designated States: all)

INVENTOR:

EL-SHERBEINI, Mohamed, 126 East Lincoln Avenue, Rahway, NJ 07065, (US)

AZZOLINA, Barbara, 126 East Lincoln Avenue, Rahway, NJ 07065, (US)

LEGAL REPRESENTATIVE:

Hiscock, Ian James et al (73622), European Patent Department, Merck & Co., Inc., Terlings Park, Eastwick Road, Harlow, Essex CM20 2QR, (GB)

PATENT (CC, No, Kind, Date): EP 1079855 A1 010307 (Basic)

WO 9961050 991202

APPLICATION (CC, No, Date): EP 99953289 990526; WO 99US11585 990526

PRIORITY (CC, No, Date): US 87308 980529

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; NL; PT; SE

INTERNATIONAL PATENT CLASS: A61K-039/00; A61K-039/02; A61K-039/108;

C07H-021/02; C07H-021/04; C12N-015/00; C12N-015/20; C12P-021/06;

C12P-021/04

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

6/3,AB/7 (Item 1 from file: 357)

DIALOG(R)File 357:Derwent Biotech Res.

(c) 2004 Thomson Derwent & ISI. All rts. reserv.

0269628 DBR Accession No.: 2001-09382 PATENT

New *Pseudomonas aeruginosa* MurC enzyme involved in bacterial cell wall biosynthesis, useful for identifying inhibitors of enzyme which are active against both Gram-positive and Gram-negative bacteria - recombinant protein production via plasmid pPaemurC expression in host cell for broad spectrum antibiotic and gene therapy

AUTHOR: El-Sherbeini M; Azzolina B

CORPORATE SOURCE: Rahway, NJ, USA.

PATENT ASSIGNEE: Merck-USA 2001

PATENT NUMBER: WO 200119979 PATENT DATE: 20010322 WPI ACCESSION NO.:

Searcher : Shears 571-272-2528

10/070775

2001-281522 (2029)

PRIORITY APPLIC. NO.: US 154073 APPLIC. DATE: 19990914

NATIONAL APPLIC. NO.: WO 2000US24845 APPLIC. DATE: 20000911

LANGUAGE: English

ABSTRACT: A purified and isolated *Pseudomonas aeruginosa* UDP-N-acetylmuramyl:L-alanine ligase (MurC) protein or a polypeptide (I) which has the fully defined 487 amino acid sequence (S2), or that is a naturally occurring mutant or polymorphic form of (S2), is claimed. Also claimed are: an isolated polynucleotide (II); a host cell (IV); production of (I); determining (M) if a candidate compound is an inhibitor of (I); and a compound that is an inhibitor of (I). (I) and (M) are useful for identifying compounds that inhibit the activity of the protein. Inhibitors of (I) are useful as broad spectrum antibiotics against Gram-positive or Gram-negative bacteria. (II) are useful in the expression and production of *P. aeruginosa* MurC protein. Partial or full length (II) can be used as DNA probes. Polynucleotides having sequences that are specific for *P. aeruginosa* MurC can be used as DNA primers. The polynucleotides can be also used in identification of various polymorphic *P. aeruginosa* MurC gene. (I) is useful for generating antibodies against the proteins, structural studies of the protein and structure or function relationship of the protein. (39pp)

6/3,AB/8 (Item 2 from file: 357)

DIALOG(R)File 357:Derwent Biotech Res.

(c) 2004 Thomson Derwent & ISI. All rts. reserv.

0269067 DBR Accession Number: 2001-08249 PATENT

New *Pseudomonas aeruginosa* MurF polypeptide useful in assays to identify compounds that modulate activity of the polypeptide and for generation of antibodies against the polypeptide - plasmid pPaeMurF-mediated gene transfer, expression in *Escherichia coli* and DNA probe for recombinant protein production, drug screening and bacterium infection prophylaxis or therapy

AUTHOR: El-Sherbeini M; Azzolina B

CORPORATE SOURCE: Rahway, NJ, USA.

PATENT ASSIGNEE: Merck-USA 2001

PATENT NUMBER: WO 200118018 PATENT DATE: 20010315 WPI ACCESSION NO.:

2001-244554 (2025)

PRIORITY APPLIC. NO.: US 153293 APPLIC. DATE: 19990910

NATIONAL APPLIC. NO.: WO 2000US24437 APPLIC. DATE: 20000906

LANGUAGE: English

ABSTRACT: A purified and isolated *Pseudomonas aeruginosa* (e.g. MB4439) MurF protein (I) containing a specified sequence (S1) of 458 amino acids or a naturally occurring mutant or polymorphic form of (S1), is claimed. Also claimed are: a purified and isolated *P. aeruginosa* murF DNA (II); a DNA (III) that is an expression vector (e.g. plasmid pPaeMurF) containing (II); a host cell (IV, e.g. *Escherichia coli*) containing (III); expressing (I) in a recombinant host cell; determining whether a candidate compound (CC) is an inhibitor of (I) by: contacting (IV) with (CC) to permit the interaction of (CC) with (I), and determining whether (CC) is an inhibitor of (I) by ascertaining the relative activity of (I) in the presence of the candidate; or contacting a sample that includes (I) or its functional derivative with (CC) to permit the interaction of (CC) and (I), and determining whether (CC) is an inhibitor of (I); a

Searcher : Shears 571-272-2528

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compound (V) that is an inhibitor of (I). (V) is useful for prophylactic or therapeutic treatment of bacterial infection. (II) is useful as a DNA probe. (40pp)

6/3,AB/9 (Item 3 from file: 357)
DIALOG(R) File 357:Derwent Biotech Res.
(c) 2004 Thomson Derwent & ISI. All rts. reserv.

0268503 DBR Accession Number: 2001-08809 PATENT
Novel purified and isolated *Pseudomonas aeruginosa* MurE polypeptide
useful in assays to identify compounds that modulate activity of the
polypeptide and for generation of antibodies against the polypeptide -
recombinant protein, DNA probe and DNA primer
AUTHOR: El-Sherbeini M; **Azzolina B**
CORPORATE SOURCE: Rahway, NJ, USA.
PATENT ASSIGNEE: Merck-USA 2001
PATENT NUMBER: WO 200119843 PATENT DATE: 20010322 WPI ACCESSION NO.:
2001-257872 (2026)
PRIORITY APPLIC. NO.: US 154117 APPLIC. DATE: 19990915
NATIONAL APPLIC. NO.: WO 2000US24743 APPLIC. DATE: 20000911
LANGUAGE: English

ABSTRACT: A purified and isolated *Pseudomonas aeruginosa* MurE protein
(I) selected from a polypeptide with a sequence of 487 amino acids
(disclosed) or a protein that is a naturally occurring mutant or
polymorphic form of (I) is claimed. Also claimed are: a purified and
isolated *P. aeruginosa* murE polynucleotide (II) e.g. (IIa)
encoding (I) having a 487 amino acid sequence and its complement,
mutant, polymorphic form, hybridization partner, etc.; an expression
vector comprising (II); a host cell (IV) comprising the vector;
expressing (I) in a recombinant host cell by transforming a suitable
host cell with the vector and culturing the host cell; determining
whether a candidate compound is an inhibitor of (I); a compound (V)
that is an inhibitor of (I); and a pharmaceutical composition
containing the inhibitor of (I). (II) has a sequence of 1,499 bp
(disclosed). The pharmaceutical composition is used for prophylaxis and
therapy of bacterial infections. (I) can be used to screen for
antibacterial compounds and for antibody formation. (II) can be used to
express (I) and as a DNA probe or DNA primer. (41pp)

6/3,AB/10 (Item 4 from file: 357)
DIALOG(R) File 357:Derwent Biotech Res.
(c) 2004 Thomson Derwent & ISI. All rts. reserv.

0248475 DBR Accession Number: 2000-02965 PATENT
New nucleic acid encoding the MurD protein of *Pseudomonas aeruginosa*,
used to identify specific inhibitors - recombinant enzyme production
via vector plasmid pPaeMurD-mediated gene transfer expression in
Escherichia coli for bacterium infection prevention and therapy
AUTHOR: El-Sherbeini M; **Azzolina B**
CORPORATE SOURCE: Rahway, NJ, USA.
PATENT ASSIGNEE: Merck-USA 1999
PATENT NUMBER: WO 9961050 PATENT DATE: 19991202 WPI ACCESSION NO.:
2000-072548 (2006)
PRIORITY APPLIC. NO.: US 87308 APPLIC. DATE: 19980529

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NATIONAL APPLIC. NO.: WO 99US11585 APPLIC. DATE: 19990526

LANGUAGE: English

ABSTRACT: A nucleic acid which encodes the MurD protein of *Pseudomonas aeruginosa* MB4439, which has a 448 amino acid protein sequence (SI) (specified), is new. Also claimed are; an expression vector containing (I); host cells transformed with this vector; the recombinant expression of MurD proteins of *P. aeruginosa* by culturing the cells; a polynucleotide (II) which is (SI) or its natural mutants or polymorphic forms; a method for identifying inhibitors (A) of MurD of *P. aeruginosa*; (A); a composition containing (A) and a carrier; and a method for treating or preventing bacterial infections via the administration of (A). The above may be useful for recombinantly producing MurD, which may be used for raising therapeutic antibodies, as a source of DNA probes and DNA primers for identifying polymorphic murD genes or detecting *P. aeruginosa*, and as antisense modulators, (A) may be useful for preventing or treating bacterial infections, especially *P. aeruginosa* infections. In an example, vector plasmid pPaeMurD, which contained the *P. aeruginosa* murD gene, was used to transform *Escherichia coli* BL21(DE3)pLysS cells. MurD express was induced via IPTG addition to the culture medium. (35pp)

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Dev, S.
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(FILE 'HCAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO, TOXCENTER, PHIC, PHIN, PASCAL, FEDRIP, DISSABS' ENTERED AT 10:01:24 ON 18 MAR 2004)

L2 57 S AZZOLINA B?/AU
L5 80 S "EL SHERBEINI M"?/AU
L6 14 S L5 AND L2
L7 13 S (L5 OR L2) AND AERUGINOSA
L8 14 S L6 OR L7
L9 7 DUP REM L8 (7 DUPLICATES REMOVED)

L9 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2001:265434 HCAPLUS
DOCUMENT NUMBER: 134:291137
TITLE: MraY gene and enzyme of Pseudomonas
aeruginosa and its use in screening for
antibacterial agents
INVENTOR(S): El-Sherbeini, Mohamed; Azzolina,
Barbara
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001025251	A1	20010412	WO 2000-US27056	20000929
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1222197	A1	20020717	EP 2000-968545	20000929
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				

PRIORITY APPLN. INFO.: US 1999-157580P P 19991004
WO 2000-US27056 W 20000929

AB Polynucleotides and polypeptides of Pseudomonas **aeruginosa**
MraY, an enzyme involved in bacterial cell wall biosynthesis, are
provided. The recombinant MraY enzyme is catalytically active in
the first step of the membrane cycle of peptidoglycan biosynthesis.
Also provided are proteins encoded by the sequences, host cells
expressing the recombinant enzyme, and probes and primers.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L9 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2001:208408 HCAPLUS
DOCUMENT NUMBER: 134:232731
TITLE: MurC gene encoding UDP-N-acetylmuramoyl ligase
from Pseudomonas **aeruginosa** and its
use in antibiotic screening
INVENTOR(S): El-Sherbeini, Mohammed; Azzolina,
Barbara

Searcher : Shears 571-272-2528

10/070775

PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001019979	A1	20010322	WO 2000-US24845	20000911
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1999-154073P P 19990914

AB The invention provides protein and DNA sequences of gene MurC from *Pseudomonas aeruginosa* encoding UDP-N-acetylmuramoyl ligase which catalyzes the ATP-dependent addition of L-alanine to UDP-N-acetylmuramoyl to form the precursor and is involved in cell wall biosynthesis. The invention also relates to vectors to express MurC enzyme recombinant protein in *E. coli* and methods of preparation of MurC enzyme. Purified and isolated MurC recombinant proteins are also provided. Nucleic acid sequences which encode functionally active MurC proteins are described. Assays for the identification of modulators of the expression of MurC and inhibitors of the activity of MurC, are also provided.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT

L9 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2001:208291 HCAPLUS
DOCUMENT NUMBER: 134:232726
TITLE: MurE gene encoding meso-diaminopimelic
acid-adding enzyme from *Pseudomonas*
aeruginosa and its use in antibiotic
screening

INVENTOR(S): El-Sherbeini, Mohammed; Azzolina,
Barbara

PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001019843	A1	20010322	WO 2000-US24743	20000911
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1999-154117P P 19990915

AB The invention provides protein and DNA sequences for gene MurE from *Pseudomonas aeruginosa* encoding the meso-diaminopimelic

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acid-adding enzyme, an ATP-dependent amino acid ligase, which catalyze the ATP-dependent addition of diaminopimelic acid to a precursor sugar peptide and is responsible for the formation of UDP-MurNAc-L-ala-D-Glu-m-Dap. The invention also relates to vectors to express MurE enzyme recombinant protein in E. coli and methods of preparation of MurE enzyme. Purified and isolated MurE recombinant proteins are also provided. Nucleic acid sequences which encode functionally active MurE proteins are described. Assays for the identification of modulators of the expression of MurE and inhibitors of the activity of MurE, are also provided.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2001:185769 HCAPLUS

DOCUMENT NUMBER: 134:232702

TITLE: MurF gene encoding D-Alanyl-D-alanine-adding enzyme from *Pseudomonas aeruginosa* and its use in antibiotic screening

INVENTOR(S): El-Sherbeini, Mohammed; Azzolina, Barbara

PATENT ASSIGNEE(S): Merck & Co., Inc., USA

SOURCE: PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001018018	A1	20010315	WO 2000-US24437	20000906
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1999-153293P P 19990910

AB The invention provides protein and DNA sequences for gene MurF from *Pseudomonas aeruginosa* which encodes UDP-N-acetylmuramyl-L-alanine-D-Glutamine-m-Dap:D-alanine-D-alanine ligase catalyzing the ATP-dependent addition of D-alanine-D-alanine to the UDP-N-acetylmuramyl-L-alanine-D-Glutamine-m-Dap precursor. The invention also relates to vectors to express MurF enzyme recombinant protein in E. coli and methods of preparation of MurF enzyme and its antibody. Purified and isolated MurF recombinant proteins are also provided. Nucleic acid sequences which encode functionally active MurF proteins are described. Assays for the identification of modulators of the expression of murF and inhibitors of the activity of MurF, are also provided.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2001:232980 HCAPLUS

DOCUMENT NUMBER: 136:2116

Searcher : Shears 571-272-2528

10/070775

TITLE: The Cell Wall and Cell Division Gene Cluster in
the Mra Operon of *Pseudomonas aeruginosa*
: Cloning, Production, and Purification of
Active Enzymes

AUTHOR(S): Azzolina, Barbara A.; Yuan, Xiling;
Anderson, Matt S.; El-Sherbeini, Mohamed

CORPORATE SOURCE: Department of Biochemistry, Merck Research
Laboratories, Rahway, NJ, 07065, USA

SOURCE: Protein Expression and Purification (2001),
21(3), 393-400
CODEN: PEXPEJ; ISSN: 1046-5928

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have cloned the *Pseudomonas aeruginosa* cell wall
biosynthesis and cell division gene cluster that corresponds to the
mra operon in the 2-min region of the *Escherichia coli* chromosome.
The organization of the two chromosomal regions in *P.*
aeruginosa and *E. coli* is remarkably similar with the
following gene order: pbp3/pbpB, murE, murF, mraY, murD, ftsW, murG,
murC, ddlB, ftsQ, ftsA, ftsZ, and envA/LpxC. All of the above *P.*
aeruginosa genes are transcribed from the same strand of DNA
with very small, if any, intragenic regions, indicating that these
genes may constitute a single operon. All five amino acid ligases,
MurC, MurD, MurE, MurF, and DdlB, in addition to MurG and MraY were
cloned in expression vectors. The four recombinant *P.*
aeruginosa Mur ligases, MurC, MurD, MurE, and MurF were
overproduced in *E. coli* and purified as active enzymes. (c) 2001
Academic Press.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L9 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 1999:763894 HCAPLUS

DOCUMENT NUMBER: 132:8992

TITLE: MurD protein and gene of *Pseudomonas*
aeruginosa for screening inhibitors of
bacterial cell wall formation

INVENTOR(S): El-Sherbeini, Mohamed; Azzolina,
Barbara

PATENT ASSIGNEE(S): Merck & Co., Inc., USA

SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9961050	A1	19991202	WO 1999-US11585	19990526
W: CA, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2333667	AA	19991202	CA 1999-2333667	19990526

Searcher : Shears 571-272-2528

10/070775

EP 1079855 A1 20010307 EP 1999-953289 19990526
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT,
IE, FI
JP 2002516076 T2 20020604 JP 2000-550509 19990526
PRIORITY APPLN. INFO.: US 1998-87308P P 19980529
WO 1999-US11585 W 19990526

AB This invention provides isolated polynucleotides that encode the MurD protein of *Pseudomonas aeruginosa*. Purified and isolated MurD recombinant proteins are also provided. Nucleic acid sequences which encode functionally active MurD proteins are described. Assays for the identification of modulators of the expression of murD and inhibitors of the activity of MurD, are also provided. Inhibition of bacterial cell wall formation is an aim of the invention.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 7 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-062802 [05] WPIDS
DOC. NO. NON-CPI: N2000-049147
DOC. NO. CPI: C2000-017548
TITLE: Apparatus for deicing the surface of propeller blades.
DERWENT CLASS: A14 A26 A95 X25
INVENTOR(S): GAGE, M E; PRUDEN, R W; AZZOLINA, B;
EL-SHERBEINI, M
PATENT ASSIGNEE(S): (UNAC) UNITED TECHNOLOGIES CORP; (MERI) MERCK & CO INC
COUNTRY COUNT: 20
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9962296	A1	19991202	(200005)*	EN	22
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: JP					
US 6069341	A	20000530	(200033)		
EP 1082875	A1	20010314	(200116)	EN	
R: DE FR GB IT					
JP 2002516780	W	20020611	(200253)		25

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9962296	A1	WO 1999-US12055	19990528
US 6069341	A	US 1998-87308	19980529
EP 1082875	A1	EP 1999-953413	19990528
		WO 1999-US12055	19990528
JP 2002516780	W	WO 1999-US12055	19990528
		JP 2000-551577	19990528

FILING DETAILS:

PATENT NO	KIND	PATENT NO
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Searcher : Shears 571-272-2528

10/070775

EP 1082875 A1 Based on WO 9962296
JP 2002516780 W Based on WO 9962296

PRIORITY APPLN. INFO: US 1998-87308 19980529

AN 2000-062802 [05] WPIDS

AB WO 9962296 A UPAB: 20000128

NOVELTY - Brush holder is moulded from thermoplastic polyetheretherketone (PEEK) containing polytetrafluoroethylene (PTFE) filler.

DETAILED DESCRIPTION - Apparatus for deicing the surface of propeller blades deposited in a spinner assembly mounted to and rotatable with the shaft of an engine installed on an aircraft, comprises:

(a) rotational interface mounted on the spinner assembly, including annular slip rings at the interface;

(b) heater elements, deposited on each propeller blade and electrically connected to slip rings; and

(c) brush block housing, with brush pockets containing electrically conductive brushes and electrical connector for receiving power from the aircraft power source.

The apparatus is controlled by an operator. The electrically conductive brushes have a contact end that contacts the rotatable surface of the slip ring and a distal end that receives the electrical current signal, connected to the electrical connector by some means. The housing is placed so that the contact end of each brush is in stationary registration with a location along the path trajectory of the slip ring.

The brush block housing is injection moulded from thermoplastic polyetheretherketone (PEEK) containing polytetrafluoroethylene (PTFE) filler.

An INDEPENDENT CLAIM is also included for a brush block assembly, used for deicing a propeller. Electrical signals are provided from a stationary power source to heater elements mounted on the propeller blades. The heater elements are electrically connected to slip rings disposed in a slip ring pattern on a spinner assembly rotational interface, comprising a monolithic housing. The housing has brush pocket(s) between two major surfaces. The interface surface of the main housing is placed in proximity to the rotational interface. The interface has keyways and releasably engages the brush holder, providing registration between them. The brush holder is moulded from thermoplastic polyetheretherketone (PEEK) containing polytetrafluoroethylene (PTFE) filler.

USE - Prevents ice formation on the airfoil surface of an aircraft's propeller blade.

ADVANTAGE - Prevents current leakage or shorting of the power source. Brush life is increased. Improves brush functional performance and extends the useful life of the housing.

DESCRIPTION OF DRAWING(S) - The figure shows propeller assembly.

Block housing assembly 44
Dwg.2/7

FILE 'HOME' ENTERED AT 10:15:59 ON 18 MAR 2004

Searcher : Shears 571-272-2528